REMARKS

Claims 1-11 are all the claims pending in the application. Claims 1, 2 and 5-6 have been amended by this Amendment.

Claim 1 has been amended to recite that the aromatic-polyether-type ultrahigh molecular weight polymer has a number-average molecular weight in terms of polystyrene of 100,000 or more. Support for the amendment to Claim 1 can be found in the specification, for example, at page 10, lines 3-10.

Claim 5 has been amended into an independent claim. Claim 5 has been further amended to recite that the aromatic-polyether-type ultrahigh molecular weight polymer has a number-average molecular weight in terms of polystyrene of 100,000 or more. Support for the amendment to Claim 5 can be found in the specification, for example, at page 10, lines 3-10.

The Title has been amended to more clearly describe the invention of the application.

No new matter has been added. Entry of the Amendment is respectfully requested.

I. Claim Objections

(1) In paragraph No. 1 of the Action, Claim 2 was objected to because the Examiner asserts that the word "An" should be changed to "The".

In response, Claim 2 has been amended to recite "The aromatic-polyether-type ion-conductive ultrahigh molecular weight polymer according to claim 1".

(2) In paragraph No. 2 of the Action, Claim 5 has been objected to as allegedly being of improper dependent form for failing to further limit the subject matter of a previous claim.

As noted, Claim 5 has been amended into an independent claim.

In view of the above, withdrawal of the foregoing claim objection to Claims 2 and 5 is respectfully requested.

II. Claim Rejections under 35 U.S.C. §112

(1) In paragraph No. 4 of the Action, Claims 1-11 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

Without acquiescing the merits of the above rejection, independent Claims 1 and 5 have been amended to recite that the aromatic-polyether-type ultrahigh molecular weight polymer has a number-average molecular weight in terms of polystyrene of 100,000 or more, respectively.

(2) In paragraph No. 6 of the Action, Claim 6 has been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. The Examiner asserts that the phrase "...the same as defined above..." does not make it clear as to where said definitions are to be found.

In response, the phrase "...the same as defined *above*..." in Claim 6 has been amended to recite "... the same as defined *in claim 5*...".

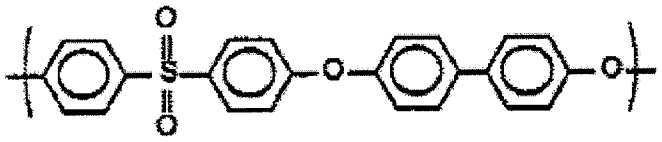
In view of the above, it is respectfully submitted that the present claims, as amended, fully comply with 35 U.S.C. §112, and withdrawal of the forgoing claim rejections is respectfully requested.

III. Claim Rejection under 35 U.S.C. § 102(b) Over Formato

In paragraph No. 8 of the Action, Claims 1-5 and 8-11 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Formato et al (WO 00/24796; "Formato").

Applicants respectfully traverse this rejection.

Formato is cited as teaching a sulfonated polyphenylsulfone homopolymer or copolymer or blends thereof (claim 22) having a repeating unit shown below and having an ion-exchange capacity of 0.5-4 meq/g (claim 24).



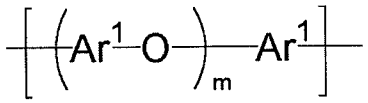
The Examiner asserts that typical polymers employed in Formato includes sulfonated products of Radel® R polyphenyl sulfone polymers (p. 39) commercially available from Amoco Polymers (p. 30). The Examiner contends that these polymers inherently possess molecular weight in the range of 2,000-100,000 and that sulfonation means introducing sulfonic acid groups to the polymer (p. 24, lines 4-9). Applicants respectfully traverse.

Independent Claims 1 and 5 presently recite, respectively, that the aromatic-polyether-type ultrahigh molecular weight polymer has a number-average molecular weight in terms of polystyrene of 100,000 or more.

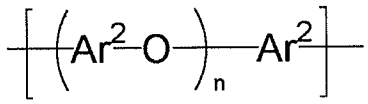
At the filing date of the present application, it was the technical common sense that ultrahigh polymer having a number-average molecular weight in terms of polystylene of 100,000 or more was not produced with common methods in engineering plastic field.

Therefore, contrary to the Examiner's assertion, Formato does not disclose or suggest ultrahigh polymer having a number-average molecular weight in terms of polystylene of 100,000 or more.

Further, independent Claims 1 and 5 recite, respectively, that the aromatic-polyether-type ultrahigh molecular weight polymer having at least one structural unit selected from those represented by the following formulas (1) and (2), and the sum of the number a of the structural unit of the formula (1) and the number b of the structural unit of the formula (2) being 2 or larger, and n represent repeating numbers, m and n independently represent a numeral of 10 or more.



(1)



(2)

Namely, the aromatic-polyether-type ion-conductive ultrahigh molecular weight polymers of the present invention have the specific repeating units of $-(Ar^1-O)_m-$ and/or $-(Ar^2-O)_n-$ and the specific bonding of $-Ar^1-Ar^1-$, $-Ar^1-Ar^2-$ and /or $-Ar^2-Ar^2-$.

Applicants respectfully submit that Formato does not disclose or suggest the specific structure of the aromatic-polyether-type ion-conductive ultrahigh molecular weight polymer, as recited in independent Claims 1 and 5. The aromatic-polyether-type ion-conductive ultrahigh molecular weight polymer of the present application is structurally different from the polymers disclosed in Formato.

In view of the above, it is respectfully submitted that the present claims are patentable over Formato, and withdrawal of the foregoing rejection under 35 U.S.C. § 102(b) is respectfully requested.

IV. Claim Rejection under 35 U.S.C. § 102(a, e) over Yoshimura

In paragraph No. 11 of the Action, Claims 1-11 have been rejected under 35 U.S.C. § 102(a, e) as allegedly being anticipated by Yoshimura et al (US 2003/0180596; "Yoshimura").

Yoshimura is cited as teaching a polymer electrolyte having an ion-exchange capacity of 1.2-1.6 meq/g (Table 1), comprises an "aromatic polymer comprising an aromatic ring in a main chain and a super strong acid group in a side chain" (claim 1). The Examiner contends that the disclosed polymers of Yoshimura include the polymer claimed in the instant invention (claims 1-6).

Applicants respectfully traverse.

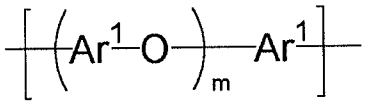
Independent Claims 1 and 5 presently recite that the aromatic-polyether-type ultrahigh molecular weight polymer has a number-average molecular weight in terms of polystyrene of 100,000 or more, respectively.

For the same reason discussed above, at the filing date of the present application, it was the technical common sense that ultrahigh polymer having a number-average molecular weight in terms of polystylene of 100,000 or more was not produced with common methods in engineering plastic field.

Therefore, contrary to the Examiner's assertion, Yoshimura does not disclose or suggest ultrahigh polymer having a number-average molecular weight in terms of polystylene of 100,000 or more.

Further, Yoshimura does not disclose or teach the specific structure of the aromatic-polyether-type ion-conductive ultrahigh molecular weight polymer of the present claims. That is,

Yoshimura does not disclose or teach the claimed aromatic-polyether-type ion-conductive ultrahigh molecular weight polymer having at least one structural unit selected from those represented by the following formulas (1) and (2) and the sum of the number a of the structural unit of the formula (1) and the number b of the structural unit of the formula (2) being 2 or larger, and n represent repeating numbers, m and n independently represent a numeral of 10 or more, as recited in independent Claims 1 and 5.



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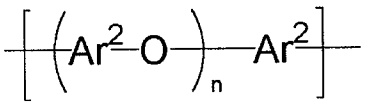

(2)

Accordingly, it is respectfully submitted that the present claims are patentable over Yoshimura, and withdrawal of the foregoing rejection under 35 U.S.C. § 102(a, e) is respectfully requested.

V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

for [signature] (Reg. 50,214)
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Date: March 24, 2009